DEPARTMENT OF ~~CONSUMER AND INDUSTRY SERVICES~~ **LICENSING AND REGULATORY AFFAIRS**

~~BUREAU OF SAFETY AND REGULATION~~ **DIRECTOR'S OFFICE**

CONSTRUCTION SAFETY STANDARDS ~~COMMISSION~~

Filed with the Secretary of State on April 4, 2013

~~These rules take effect 15 days after filing with the Secretary of State~~

These rules become effective immediately upon filing with the Secretary of State unless adopted under section 33, 44, or 45a(6) of 1969 PA 306. Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

(By authority conferred on the **director of the department of licensing and regulatory affairs** ~~construction safety standards commission~~ by sections 19 and 21 of **1974 PA** ~~Act No.~~ 154 **and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030)** ~~of the Public Acts of 1974, as amended, being SS408.1019 and 408.1021 of the Michigan Compiled Laws)~~

R 408.41932, R 408.41934, R 408.41935, R 408.41943, R 408.41945, R 408.41949, R 408.41952, R 408.41953, R 408.41954, R 408.41957, R 408.41959, R 408.41964, R 408.41977, and R 408.41980 of the Michigan Administrative Code are amended, and R 408.41902 is added, and R 408.41931, R 408.41956, R 408.41970, R 408.41971, R 408.41974, R 408.41975, and R 408.41979 are rescinded, as follows

PART 19. TOOLS

R 408.41902 Adopted and referenced standards.

Rule 1902. (1) The following standards are adopted by reference in these rules and are available from IHS Global, 15 Inverness Way East, Englewood, Colorado, 80112, USA, telephone number: 1-800-854-7179 or via the internet at web-site: http://global.ihs.com a cost as of the time of adoption of these rules as stated in this subrule.

(a) American National Standards Institute (ANSI) 01.1 "Safety Code for Woodworking Machinery," 1961 edition. Cost: $20.00.

(b) ANSI A10.3 "Powder-Actuated Fastening Systems," 1985 edition. Cost: $20.00.

(c) American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section VIII, "Unfired Pressure Vessels," 1980 edition. Cost: $514.00.

(2) The standards adopted in subrule (1) of this rule are also available for inspection at the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143.

(3) Copies of the standards adopted in subrule (1) of this rule may be obtained from the publisher or may also be obtained from the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143, at the cost charged in this rule, plus $20.00 for shipping and handling.

(4) The following Michigan occupational safety and health standards are referenced in these rules. Up to 5 copies of these standards may be obtained at no charge from the Michigan Department of licensing and regulatory affairs, MIOSHA standards section, 7150 Harris Drive, P.O. Box 30643, Lansing, MI, 48909-8143 or via the internet at website: www.michigan.gov/mioshastandards. For quantities greater than 5, the cost, at the time of adoption of these rules, is 4 cents per page.

(a) Construction Safety Standard Part 6 "Personal Protective Equipment," R 408.40601 to R 408.40641.

(b) Construction Safety Standard Part 22 "Signals, Signs, Tags And Barricades," R 480.42201 to R 408.42242,

(c) Occupational Health Standard Part 621 "Health Hazard Control for Specific Equipment and Operations for Construction," R 325.62102 to R 325.62126.

R 408.41931. ~~Employer and employees; responsibilities.~~ **Rescinded.**

~~Rule 1931. (1) An employer shall do all of the following:~~

~~(a) Ensure that an employee has been trained in the use of tools before authorizing their use.~~

~~(b) Maintain, or require to be maintained, tools free of defects that could cause injury to an employee.~~

~~(2) An employee shall do all of the following:~~

~~(a) Use personal protective equipment as prescribed by Part 6. Personal Protective Equipment, being R 408.40601 et seq. of the Michigan Administrative Code.~~

~~(b) Report defective tools to the employer.~~

~~(c) Not use a tool for other than its designed or approved use.~~

R 408.41932. Tools generally.

Rule 1932. (1) Regardless of ownership, a tool or part of a tool with a defect that could cause an injury shall be replaced or repaired before use.

(2) When a guard is provided on a tool, it shall not be made inoperative. It may be removed only for repair, service, or setup, and it shall be replaced before the tool is returned to use.

(3) ~~All means of power transmission and reciprocating and rotating parts of a tool, such as belts, gears, sprockets, shafts, pulleys, and chains, shall be guarded if exposed to contact. General industry safety standard, Part 7. Guards for Power Transmission, being R 408.10701 et seq. of the Michigan Administrative Code, may be used as a source of reference for guarding requirements. This standard may be purchased from the Safety Standards Division, Michigan Department of Consumer and Industry Services, Box 30643, 7150 Harris Drive, Lansing, Michigan 48909.~~

~~(4)~~ Hand tools or portable powered tools shall not be left on a scaffold, ladder, or work platform after the completion of the work operation or day. Before the scaffold, ladder, or work platform is moved, all tools shall be removed or properly secured against displacement.

~~(5) Racks, bins, or tool chests shall be provided for the storage of tools, and any sharp or pointed edges shall be arranged so as not to create a hazard.~~

(4)~~(6)~~ A tool shall be visually inspected by the user for safe operation before each daily use and, when found defective, shall be removed from service and tagged. The tag shall be in compliance with ~~the provisions of rule 2241 of the~~ construction safety ~~standards commission~~ standard, Part 22 “Signals, Signs, Tags, and Barricades,” **which is referenced in R 408.41902.** ~~being R 408.42241 of the Michigan Administrative Code.~~

(5)~~(7)~~ A tool that is used in a potentially explosive atmosphere shall be designed and approved for such atmosphere.

(6)~~(8)~~ A safety device or operating control shall not be made inoperative, except for the removal of lock-on control devices.

R 408.41934. Electric-powered tools.

Rule 1934. (1) An electric-powered tool, such as a saw, drill motor, and router, shall be grounded. This requirement does not pertain to ungrounded electrical systems. Ground fault circuit interrupters shall be used with ungrounded electrical systems.

(2) Subrule (1) of this rule does not apply to a double insulated electric power tool labeled with underwriters laboratory or other nationally recognized testing laboratory approval for double-insulated tools.

(3) A portable, power-driven circular saw shall be equipped with a guard above and below the base plate or shoe. The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contact with the work. When the saw is withdrawn from the work, the lower guard shall return automatically and instantly to the covered position.

(4) ~~A cracked, bent, or damaged saw blade shall not be used.~~

~~(5) The size and shape of the bore of the saw blade shall provide the proper fit of arbors or proper adapters.~~

~~(6) An electric-powered tool shall not be left running unattended.~~

~~(7) An extension cord to an electric-powered tool shall be located so as to minimize tripping hazards.~~

~~(8)~~ The trailing cord of a portable powered tool shall not be used to hoist or lower the tool.

(5)~~(9)~~ A powered tool shall be disconnected from its power source when it is serviced or when the point of operation device is changed by a device or tool.

(6)~~(10)~~ When not grounded or double-insulated, an electrically powered hand tool used for the installation of power transmission and distribution systems shall be connected to the power supply by means of an isolating transformer or other isolated power supply.

R 408.41935. Portable pneumatic-powered tools.

Rule 1935. (1) ~~Pneumatic tools shall be kept in good operating condition and be thoroughly inspected before use. Particular attention shall be given to the control and exhaust valves, hose connections, and die and tool holders.~~

~~(2) A portable pneumatic grinder or drill shall be equipped with a means to maintain the speed of the grinder or drill at not more than the tool’s rated speed.~~

~~(3)~~ Safety clips or retainers shall be installed on pneumatic impact tools to prevent dies and tools from being accidentally expelled from the barrel.

(2)~~(4)~~ Pressure shall be shut off by means of a valve and exhausted from lines before disconnecting the lines from tools or connections, except when using a quick makeup coupling.

(3)~~(5)~~ Safety fasteners shall be provided at connections between tools and hose lines and at all quick makeup-type connections to prevent accidental disengagement.

(4)~~(6)~~ The rated pressure capacity of hoses, pipes, filters, valves, and fittings shall be not less than the rated pressure capacity of the tool. The pneumatic tool and its accessories shall not be operated at a pressure that is more than the rated capacity.

~~(7) Hoses shall not be laid over ladders, stairways, scaffolds, ramps, or runways in a manner that creates a tripping hazard.~~

(5)~~(8)~~ Defective hoses or connections shall be removed from service.

(6)~~(9)~~ A hose shall not be used for hoisting or lowering a pneumatic-powered tool.

(7)~~(10)~~ A pneumatic-powered tool that has a hose which has an inside diameter of more than 1/2 of an inch shall have a safety device at the source of supply or branch line to reduce the pressure in case of hose failure.

(8)~~(11)~~ An airless spray gun that atomizes paint and fluids at a pressure of more than 1,000 pounds per square inch shall be equipped with an automatic or visible manual safety device that prevents the pulling of the trigger to release the paint or fluid until the safety device is manually released.

~~(12) A line used to supply air to a pneumatic grinder shall be equipped with a moisture accumulator and oiler.~~

~~(13) A pneumatic hose used on or around electrically energized lines or equipment shall be located so that it does not become part of the electrical circuit.~~

(9)~~(14)~~ Abrasive blast cleaning nozzles shall be equipped with an operating valve that can only be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.

R 408.41943. Powder-actuated tool operation.

Rule 1943. (1) An operator and assistant using a powder actuated tool shall be safeguarded by means of eye protection. Head and face protection shall be used, as required by the working conditions. Eye protection and head and face protection shall be provided for and as prescribed in **Construction Safety Standard** Part 6 "Personal Protective Equipment," **which is referenced in R 408.41902.** ~~being R 408.40617, R 408.40623, and R 408.40624 of the Michigan Administrative Code.~~

(2) Before using a powder-actuated tool, the operator shall inspect it to determine to the operator's satisfaction that it is clean, that all moving parts operate freely, and that the barrel is free from obstructions. A tool found not to be in proper working order, or that develops a defect during use, shall be immediately removed from service and tagged, and not used until repaired. The tag shall be as prescribed in ~~rule 2241 of the~~ Construction Safety ~~standards commission~~ Standard Part 22 "Signals, Signs, Tags, and Barricades," **which is referenced in R 408.41902.** ~~being R 408.42241 of the Michigan Administrative Code.~~

(3) A powder-actuated tool shall not be loaded until just prior to the intended firing time. An unattended powder-actuated tool shall not be left loaded.

(4) A powder-actuated tool shall not be left unattended in a place where it is available to unauthorized persons.

(5) Neither a loaded nor an empty powder-actuated tool shall be pointed at any employee, and hands should be kept clear of the open barrel end.

(6) A fastener shall not be driven **under any of the following conditions**:

(a) Through an existing hole, unless a positive guide is used to secure accurate alignment.

(b) Into a material which can be easily penetrated, unless the material is backed by a substance that will prevent the fastener from passing completely through and creating a flying missile hazard on the other side.

(c) Into a very hard or brittle material, such as cast iron, glazed tile, surface hardened steel, glass block, live rock, face brick, or hollow tile, unless designed for such use. Before fastening any questionable material, the operator shall determine its suitability by using a fastening as a center punch. If the fastener point does not easily penetrate, is not blunted, and does not fracture the material, initial test fastenings shall then be made pursuant to the tool manufacturer's recommendations.

(d) Directly into material, such as brick or concrete, closer than 3 inches from the unsupported edge or corner, or into a steel surface closer than 1/2 inch from the unsupported edge or corner, unless a special guard, fixture, or jig is used. As an exception, a low velocity powder-actuated tool may drive no closer than 2 inches from the edge in concrete or 1/4 inch in steel. When fastening other material such as a 2 inch by 4 inch wood section to a concrete surface, a fastener of no greater than 7/32 inch shank diameter may be driven not closer than 2 inches from the unsupported edge or corner of the work surface.

(7) A fastener shall not be driven into a spalled area caused by an unsatisfactory fastening.

(8) A powder-actuated tool shall be used with the correct guard, shield, or attachment recommended by the manufacturer.

R 408.41945. Powder-actuated tools; design and construction. ~~adoption of standard.~~

Rule 1945. A powder-actuated tool shall be designed and constructed as prescribed in section 6 of the ANSI standard, A10.3 ~~1985~~ "Powder-Actuated Fastening Systems," **1985 edition,** which is adopted ~~in these rules~~ by reference **in R 408.41902.** ~~and may be inspected at the Lansing office of the department of consumer and industry services. The standard may be purchased at a cost as of the time of adoption of these rules of $24.00 from the American National Standards Institute, 11 West 42nd Street, New York, New York, 10036, or from the Michigan Department of Consumer and Industry Services, Safety Standards Division, 7150 Harris Drive, Box 30643, Lansing, Michigan 48909.~~

R 408.41949. Powder-actuated tool loads and studs.

Rule 1949. (1) Power loads shall be coded and used as prescribed in section 7 and table 1 of the ANSI standard A10.3 ~~1985,~~ "Powder-Actuated Fastening Systems," which is adopted ~~in these rules~~ by reference in **R 408.41902.** ~~R 408.41945.~~

(2) Studs or other fasteners used in powder-actuated tools shall be only those specifically manufactured for use in powder-actuated tools.

R 408.41952**. Woodworking tools and machinery.** ~~Stationary circular saws; generally.~~

Rule 1952. **All woodworking tools and machinery shall meet other applicable requirements of the ANSI standard 01.1 "Safety Code for Woodworking Machinery," 1961 edition, which is adopted by reference in R 408.41902.** ~~(1) An automatic cut-off saw that strokes continuously without the operator being able to control each stroke shall not be used.~~

~~(2) Lugs shall be cast on saw frame or tables or another means shall be provided to limit the saw blade size that can be mounted so as to avoid overspeed caused by mounting a saw larger than intended.~~

~~(3) The operating speed as designated by the manufacturer shall be etched or otherwise permanently marked on a circular saw blade more than 20 inches in diameter. A saw blade shall not be operated at a higher speed than shown on the blade. When a marked saw blade is retensioned for a different speed, the marking shall be corrected to show the new speed.~~

~~(4) A hand-fed circular ripsaw shall have a spreader to prevent material from squeezing the saw or being thrown back at the operator. The spreader shall be made of steel, or its equivalent, and shall be thinner than the saw kerf and slightly thicker than the saw disk. It shall be at least 1 inch wide at the table to provide adequate stiffness or rigidity to resist any reasonable side thrust or blow tending to bend or throw it out of position. The spreader shall be attached so it will remain in true alignment with the saw, even when either the saw or table is tilted. It should be placed so there is not more than a 1/2 inch space between the spreader and the back of the saw when the largest saw is mounted in the machine. A spreader need not be used in connection with grooving, dadoing, or rabbeting. On the completion of such operations, the spreader shall be replaced immediately.~~

~~(5) A hand-fed circular ripsaw shall have nonkickback fingers or dogs located to oppose the thrust or tendency of the saw to pick up the material or to throw it back at the operator. They shall be designed to provide holding power for all the thicknesses of material being cut.~~

~~(6) The practice of inserting wedges between the saw disk and the collar to form what is commonly known as a wobble saw is prohibited.~~

~~(7) Combs, featherboards, or suitable jigs shall be provided at the work place for use when a guard cannot be used, as in dadoing, grooving, jointing, moulding, and rabbeting.~~

~~(8) A cracked, bent, or damaged saw blade shall not be used.~~

~~(9) The bore of a saw blade shall be of proper size and shape to properly fit arbors or proper adapters.~~

R 408.41953. Circular table saw guards.

Rule 1953. (1) A circular table saw shall have a hood type guard covering the blade at all times when not in use. When in use, the hood type guard shall enclose that part of the blade above the table and that part of the blade above the material by adjusting automatically to the thickness of the material being cut, or it may be a fixed or manually adjusted hood-type guard if the hood remains in contact with the material.

(2) A hood-type guard shall be made of 14-gauge metal or thicker. Plastic may be used if it can resist blows and strains incidental to reasonable operation, adjusting, and handling, and is designed to protect the operator from flying splinters and broken saw teeth. The guard shall be made of material soft enough so that it will be unlikely to cause tooth breakage.

(3) The hood shall be mounted so that its operation is positive, reliable, and in true alignment with the saw. The mounting shall be of sufficient strength to resist any reasonable side thrust or other force tending to throw it out of line.

~~(4) Where a hood-type guard cannot be used because of unusual shapes or cuts, a jig or fixture providing equal safety to the operator shall be used. On the completion of these operations, the guard shall be replaced immediately.~~

~~(5) A push stick shall be used in cutting short or narrow stock.~~

R 408.41954. Radial arm saws; guards, spreaders, and stops.

Rule 1954. (1) The upper hood of a radial arm saw shall completely enclose the upper portion of the blade down to a point that includes the end of the saw arbor. The upper hood shall be constructed in a manner and of not less than 14-gauge sheet metal or equivalent material that protects the operator from flying splinters and broken saw teeth and deflects sawdust away from the operator. The sides of the lower exposed portion of the blade shall be guarded to the full diameter of the blade by a device that automatically adjusts itself to the thickness of the stock and remains in contact with the stock being cut to give the maximum protection possible for the operation being performed.

(2) Nonkickback fingers or dogs shall be located on both sides of each radial arm saw blade used for ripping to oppose the thrust or tendency of the saw to pick up the material or to throw it back toward the operator. They shall be designed to provide adequate holding power for all thicknesses of material being cut. When a radial arm saw is used for ripping, a spreader should be provided that complies with Rule 1952(4).

(3) An adjustable stop shall be provided to prevent the forward travel of the blade beyond the position necessary to complete the cut in repetitive operations. A limit chain or other equally effective device shall be provided to prevent the saw blade from sliding beyond the edge of table or the table at that place shall be extended to eliminate overrun.

(4) The cutting head of a radial arm saw shall return gently, without rebound, to the starting position when released by ~~1~~ **either** of the following means:

(a) Sloping the unit.

(b) A counterweight system. This system shall not use fiber and synthetic rope or springs.

~~(5) Ripping and ploughing shall be against the direction in which the saw turns. The direction of the saw rotation shall be conspicuously marked on the hood. In addition, a permanent label colored standard danger red, not less than 1 1/2 inches~~

~~by 3/4 inch, shall be affixed to the rear of the guard at approximately the level of the arbor, reading as follows: DANGER: Do Not Rip or Plough From This End."~~

R 408.41956. ~~Jointers; use and guards.~~ **Rescinded.**

~~Rule 1956. (1) Each hand-fed planer and jointer with a horizontal or vertical head shall have a cylindrical cutting head, the knife projection of which shall not extend more than 1/8 inch beyond the cylindrical body of the head. Square cutting heads shall not be used on jointers and planers.~~

~~(2) The opening in the jointer table shall be kept as small as possible. The clearance between the edge of the rear table and the cutter head shall be not more than 1/8 inch. The table throat opening shall be not more than 2 1/2 inches when tables are set or aligned for zero cut.~~

~~(3) A proper push block shall be used when jointing short or narrow stock.~~

~~(4) A hand-fed jointer with a horizontal or vertical cutting head shall have an automatic guard covering all of sections of the cutting head on the working side of the fence or guard. The guard shall effectively keep the operator's hand from coming in contact with the revolving knives. The guard shall adjust itself automatically so as to cover the unused portion of the cutting head and shall remain in contact with the material at all times.~~

~~(5) A hand-fed jointer with a horizontal cutting head shall have a guard covering the section of the head back of the gauge or fence.~~

~~(6) Vertical head jointers shall have an exhaust hood covering the section of the head back of the gauge or fence.~~

~~(7) The minimum length of the piece jointed shall be not less than 4 times the distance between the 2 tables. Neither half of the jointer table should be adjusted horizontally so that the clearance between the edge of the table and revolving knives is more than 1/4 inch.~~

R 408.41957. Stationary machine tools generally.

Rule 1957. (1) Machine tools, such as band saws, drill presses, and pipe-cutting and pipe-threading machines, which are set up on a construction project in a temporary stationary position shall have a stop device which is within reach of the operator's designated position and shall have power on/off switch. The switch shall be located and guarded so as to prevent unintentional activation by contact with objects or part of the body.

(2) A foot control shall be provided with a cover or guard that is capable of preventing accidental activation.

~~(3) Frames of electrically driven or supplied machines shall be grounded.~~

~~(4) Band saws and other machinery requiring warm-up for safe operation shall be permitted to warm up before being put into operation when temperatures are below 45 degrees Fahrenheit.~~

~~(5) The use of cracked, bent, or otherwise defective parts, such as saw blades, cutters, and knives, is prohibited.~~

~~(6) Bases or frames of temporary stationary machinery shall be secured by fasteners made of slip-resistant materials to prevent movement or upset.~~

R 408.41959. Fuel-powered tools.

Rule 1959. (1) A fuel-powered tool shall be stopped before being refueled, serviced, or maintained.

(2) When using a fuel-fired powered tool in an enclosed area, the toxic fumes shall be exhausted as prescribed by **Occupational Health Standard Part 621 "Health Hazard Control for Specific Equipment and Operations for Construction," which is referenced in R 408.41902.** ~~the rules of the Department of Consumer and Industry Services, being O.H. rules 2101(2) and 3101. These rules are available from the Michigan Department of Consumer and Industry Services, 3500 N. Logan, Box 30643, Lansing, Michigan 48909.~~

(3) ~~A fuel-fired tool's moving parts, such as a flywheel, rotating screen, or clutch, shall be guarded.~~

~~(4)~~ A fuel-fired portable tool shall be moved a minimum of 10 feet from the place where it was refueled before starting.

~~(5) An engine throttle control provided on a fuel-powered tool shall be located so that it can be operated only while the operator maintains a secure grip on the tool.~~

~~(6) A fuel-fired tool shall have a guard that protects the throttle lever from inadvertent contact.~~

~~(7) A centrifugal clutch, if provided on a fuel-fired tool, shall have a throttle control, carburetor, and clutch system so that if the throttle control is released, the engine idle speed shall become lower than the clutch disengagement speed, allowing the driven components to come to a complete stop.~~

(4)~~(8)~~ A chain saw's chain shall be stopped if it is not being used for sawing. A chain saw shall be carried by the top handle with the guide bar to the rear.

(5)~~(9)~~ The use of a chain saw to open a hole in a solid object, such as a floor, wall, or panel, is prohibited.

~~(10) A manual chain oiler control, if provided on a chain saw, shall be located so that it can be operated without the operator relinquishing a secure grip on the saw.~~

(6)~~(11)~~ A chain saw's chain shall be guarded adjacent to the handle area. Sawdust from a chain saw shall be directed away from the operator.

R 408.41964. Hydraulic power tools.

Rule 1964. (1) A hydraulically powered tool shall use approved fire-resistant fluids which do not change the performance characteristics during temperature extremes.

(2) The rated capacity of hydraulic hose, valves, pipe, filters, and other fittings shall not be exceeded.

~~(3) Hose or hydraulic power tools used around electrically energized lines or equipment shall be located so as not to become part of the electrical circuit.~~

R 408.41970. ~~Powered feed rolls.~~ **Rescinded.**

~~Rule 1970. Powered feed rolls shall have either of the following:~~

~~(a) The in-running side of the feed rolls guarded by a barrier which is fixed or adjustable and which is designed so that the material can be fed without permitting the operator's fingers to be caught between the feed rolls or feed rolls and guard.~~

~~(b) An emergency stop device which can be activated by the body to stop the feed rolls. When an emergency stop device has been actuated, the machine shall be restarted manually.~~

R 408.41971. ~~Roll-form machines.~~ **Rescinded.**

~~Rule 1971. (1) Ninety days after the effective date of these rules, an automatically fed roll-form machine shall have a shield that runs the entire length of the point of operation which will prevent horizontal access to the rolls or shall have a continuous stop cable that runs the length of the machine. The shield shall be secured to the machine.~~

~~(2) A manually fed roll forming machine shall be guarded as prescribed in 408.41970.~~

R 408.41974. ~~Powered clamping device.~~ **Rescinded.**

~~Rule 1974. An operator of a powered clamping device, except for a pivoted pillar buck used for holding a workpiece, unless remote from the point of operation, shall be protected by 1 of the following:~~

~~(a) Guarding or adjusting the device so that the opening between the clamp and workpiece insertion is not more than 1/4 of an inch.~~

~~(b) Two-hand controls furnished to and used by each operator.~~

~~(c) A single control for each operator if the operator is remote from the point of operation.~~

~~(d) A means which would prevent the clamping device from closing while the employee is in the point of operation~~.

R 408.41975. ~~Slitter.~~ **Rescinded.**

~~Rule 1975. A slitter shall be in compliance with all of the following provisions:~~

~~(a) The in-running side shall be guarded as specified in R 408.41970.~~

~~(b) Have a device to cut scrap into short lengths or a rewinder to rewind the scrap for safe handling.~~

~~(c) Have a method to secure the loose end to the coil before removing it from the rewinder.~~

R 408.41977. Metalworking machinery or equipment; maintenance and lubrication.

Rule 1977. ~~(1) A power source of any metalworking machine or equipment to be repaired or serviced shall be locked out and, where required, residual pressure relieved by each employee doing such work if unexpected motion would cause injury, except where power is essential for testing and setup.~~

~~(2)~~ Any of the following methods shall be used to lubricate metalworking machinery or equipment:

(a) Manual lubrication when the machine can be shut off and locked out.

(b) The use of an automatic pressure or gravity feed system.

(c) The use of an extension pipe leading to an area outside guards or away from any hazard.

(d) The use of a means which would provide equal or greater protection to the employee than the methods specified in subdivisions (a), (b), or (c) of this subrule.

R 408.41979. ~~Squaring shear.~~ **Rescinded.**

~~Rule 1979. (1) A mechanical or manual squaring shear shall be in compliance with 1 of the following provisions:~~

~~(a) Have the blade and hold down clamp guarded by a fixed barrier set in accordance with figure 4.~~

~~(b) Have automatic clamps set within 1/4 of an inch of the table or stock with the cutouts filled in so that the fingers of the operator cannot enter the pinch point.~~

~~(c) Have a self-adjusting barrier with a limit of not more than 1/4 of an inch above the table or material.~~

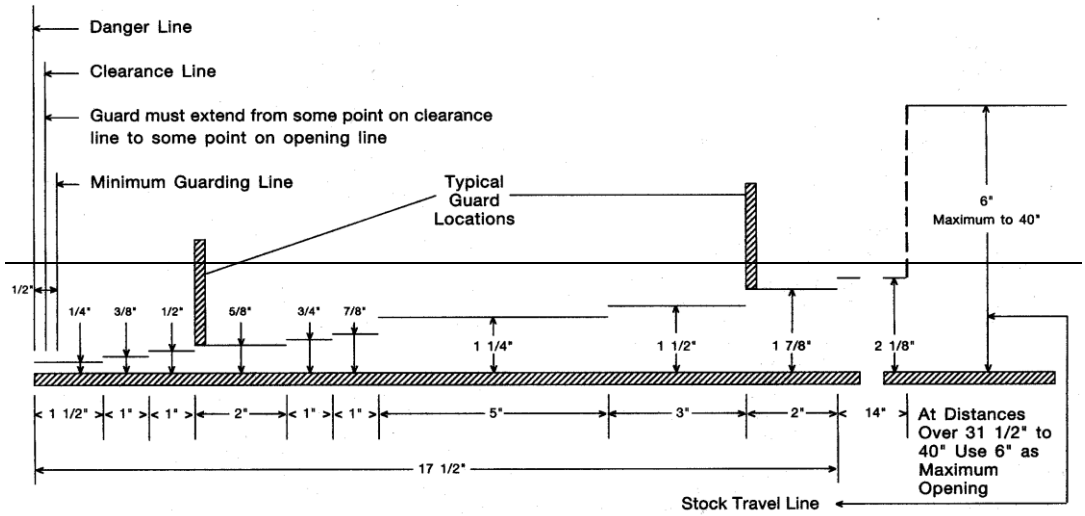
~~(2) Where small stock is being sheared, a pusher stick shall be provided and used.~~

~~(3) An employee who tends the backside of a squaring shear shall be separated from the moving parts by a table, rack, or chute, such as the back gauge, shear blade, or workpiece on which the sheared stock shall fall before being handled, or else the point of operation shall be guarded as prescribed in subrule (1)(a) of this rule. The table rack or chute shall maintain the employee's position not less than 3 feet from the point of operation or a hazardous moving part.~~

~~(4) An automatically fed squaring shear shall be guarded by a barrier that is located to prevent access to the point of operation. The guard may be swung aside for hand-feeding if the control is on inch setting.~~

~~(5) Figure 4 reads as follows:~~

~~FIGURE 4~~
~~POSITIONING OF GUARD~~



~~Fig.1 shows the acceptable safe openings between the bottom edge of a guard and feed table at various distances from the danger line (joint of operation).~~

~~The *clearance line* marks the distance required to prevent contact between guard and moving parts.~~

~~The *minimum guarding line* is the distance between the infeed side of the guard and the danger line which is 1/2 inch from the danger line.~~

~~The various openings are such that for average size hands, an operator's fingers will not reach the point of operation.~~

~~After installation of point of operation guards, and before a job is released for operation, a check shall be made to verify that the guard will prevent the operator's hands from reaching the point of operation.~~

R 408.41980. Air receivers.

Rule 1980. (1) All new air receivers installed after **July 28, 1995,** ~~the effective date of these rules~~ shall be constructed in accordance with the ~~1980 edition of~~ American Society Of Mechanical Engineers **(ASME)** "Boiler And Pressure Vessel Code," Section VIII, **"Unfired Pressure Vessels," 1980 edition** which **is** ~~are~~ adopted ~~in these rules~~ by reference **in R 408.41902.** ~~and are available from the American Society of Mechanical Engineers, 22 Law Drive, Box 2350, Fairfield, New Jersey 07007-2350, or from the Safety Standards Division, Michigan Department of Consumer and Industry Services, Box 30643, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $460.00.~~

(2) All safety valves used shall be constructed, installed, and maintained in accordance with the ~~1980 edition of the American society of mechanical engineers~~ **ASME "**Boiler and Pressure Vessel Code,' Section VIII, **"Unfired Pressure Vessels," 1980 edition** which **is** ~~are~~ adopted ~~in these rules~~ by reference **in R 408.41902.** ~~and are available from the American Society of Mechanical Engineers, 22 Law Drive, Box 2350, Fairfield, New Jersey 07007-2350, or from the Safety Standard Division, Michigan Department of Consumer and Industry Services, Box 3064, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $460.00.~~

(3) Air receivers shall be installed so that all drains, handholes, and manholes are easily accessible. An air receiver shall not be buried underground or located in an inaccessible place.

(4) A drain pipe and valve shall be installed at the lowest point of every air receiver to provide for the removal of accumulated oil and water. Adequate automatic traps may be installed in addition to drain valves. The drain valve on the air receiver shall be opened and the receiver completely drained frequently to prevent the accumulation of excessive amounts of liquid in the receiver.

(5) Every air receiver shall be equipped with an indicating pressure gauge that is located so that it is readily visible and equipped with 1 or more spring-loaded safety valves. The total relieving capacity of the safety valves shall be adequate to prevent pressure in the receiver from exceeding the maximum allowable working pressure of the receiver by more than 10%.

(6) A valve shall not be placed between the air receiver and its safety valve or valves.

(7) Safety appliances, such as safety valves, indicating devices, and controlling devices, shall be constructed, located, and installed so that they cannot be readily rendered inoperative by any means, including the elements.

(8) All safety valves shall be tested frequently at regular intervals to determine whether they are in good operating condition.